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ABSTRACT

This document presents the effects of variations of a schoolwide restructuring program, Success for All, on student reading achievement and other outcomes in elementary schools serving large numbers of disadvantaged students. Success for All includes the following elements: (1) research-based preschool and kindergarten programs; (2) beginning and intermediate reading programs in grades 1 through 3; (3) one-to-one tutoring to low-achieving students; and (4) family support programs. A total of 7 schools and 3,750 students were studied. The schools varied in location (Baltimore and Berlin, Maryland; and Philadelphia, Pennsylvania), levels of resources available, and duration of program implementation (1-3 years). Comparisons with matched students from other schools indicated strong positive effects on most individually administered reading measures in most schools, especially for students who have been in the program since the first grade. Particularly large effects were found on students who were in the lowest 25 percent of their grades on pretests. Retentions in grade and special education placements were reduced in high-resource schools. These results were interpreted to indicate that Success for All can have substantial effects on student achievement, and that the goal of success for every student may be feasible in the fully funded form of the program. Statistical data are presented in six tables. A 23-item list of references is included. (Author/SLD)

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SUCCESS FOR ALL

Multi-Year Effects of a Schoolwide Elementary Restructuring Program

Nancy A. Madden, Robert E. Slavin, Nancy L. Karweit,
Lawrence Dolan and Barbara A. Wasik

Report No. 18

May 1991

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Center for Research on Effective Schooling for Disadvantaged Students
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The Center

The mission of the Center for Research on Effective Schooling for Disadvantaged Students (CDS) is to significantly improve the education of disadvantaged students at each level of schooling through new knowledge and practices produced by thorough scientific study and evaluation. The Center conducts its research in four program areas: The Early and Elementary Education Program, The Middle Grades and High Schools Program, the Language Minority Program, and the School, Family, and Community Connections Program.

The Early and Elementary Education Program

This program is working to develop, evaluate, and disseminate instructional programs capable of bringing disadvantaged students to high levels of achievement, particularly in the fundamental areas of reading, writing, and mathematics. The goal is to expand the range of effective alternatives which schools may use under Chapter 1 and other compensatory education funding and to study issues of direct relevance to federal, state, and local policy on education of disadvantaged students.

The Middle Grades and High Schools Program

This program is conducting research syntheses, survey analyses, and field studies in middle and high schools. The three types of projects move from basic research to useful practice. Syntheses compile and analyze existing knowledge about effective education of disadvantaged students. Survey analyses identify and describe current programs, practices, and trends in middle and high schools, and allow studies of their effects. Field studies are conducted in collaboration with school staffs to develop and evaluate effective programs and practices.

The Language Minority Program

This program represents a collaborative effort. The University of California at Santa Barbara is focusing on the education of Mexican-American students in California and Texas; studies of dropout among children of recent immigrants are being conducted in San Diego and Miami by Johns Hopkins, and evaluations of learning strategies in schools serving Navajo, Cherokee, and Lumbee Indians are being conducted by the University of Northern Arizona. The goal of the program is to identify, develop, and evaluate effective programs for disadvantaged Hispanic, American Indian, Southeast Asian, and other language minority children.

The School, Family, and Community Connections Program

This program is focusing on the key connections between schools and families and between schools and communities to build better educational programs for disadvantaged children and youth. Initial work is seeking to provide a research base concerning the most effective ways for schools to interact with and assist parents of disadvantaged students and interact with the community to produce effective community involvement.

Abstract

This article presents the effects of variations of a schoolwide restructuring program, Success for All, on student reading achievement and other outcomes in elementary schools serving large numbers of disadvantaged students. Success for All uses research-based preschool and kindergarten programs, beginning and intermediate reading programs in grades 1-3, one-to-one tutoring to low-achieving students, family support programs, and other elements. A total of seven schools were studied. The schools varied in location, levels of resources available, and duration of program implementation (1-3 years). Comparisons with matched students indicated strong positive effects on most individually administered reading measures in most schools, especially for students who have been in the program since first grade. Particularly large effects were found on students who were in the lowest 25% of their grades on pretests. Retentions in grade and special education placements were reduced in high-resource schools. These results were interpreted to indicate that Success for All can have substantial effects on student ahievement, and that the goal of success for every student may be feasible in the fully funded form of the program.

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Introduction

This is a time of rapid change and new opportunities for research and practice relating to the education of students who are at risk of school failure. The education of disadvantaged students is being seriously discussed at all levels of government and society. Although most federal education programs are falling behind the rate of inflation, funding for Chapter 1 (programs for low achieving disadvantaged students) has increased from $4.3 billion in 1988-89 to $6.2 billion in 1991-92. Changes in Chapter 1 implemented under the Hawkins-Stafford bill of 1988 have encouraged school districts to implement a more diverse range of Chapter 1 programs. In particular, many inner-city districts are taking advantage of the bill's provision allowing schools that serve very disadvantaged populations to use their Chapter 1 dollars to serve all students (see Committee on Education and Labor, 1989).

Although there is now an unprecedented willingness to experiment with alternative instruction models in schools that serve disadvantaged students and a willingness to spend more on programs with demonstrated effectiveness, few coherent models have been designed for schoolwide use in schools that serve disadvantaged students, and fewer still have convincing evidence that they increase student achievement.

One exception to this is a program called Success for All (Slavin, Madden, Karweit, Livermon, & Dolan 1990). Success for All is designed to attempt to ensure that every student in a high-poverty school will succeed in acquiring basic skills in the early grades. Success is defined as performance in reading, writing, language arts, and mathematics at or near grade level by the third grade, maintenance of this status through the end of elementary grades, and avoidance of retention or special education. The program seeks to accomplish this objective by implementing research-based preschool and kindergarten programs, one-to-one tutoring in reading to students (especially first graders) who need it, frequent assessment of progress in reading, and a family support program (program elements are described in detail below).

The principal theoretical basis for the Success for All approach is that learning deficits must be prevented in a comprehensive approach emphasizing early education, improvement in instruction and curriculum, and intensive intervention at the earliest possible stage, when deficits first begin to appear. The need for remediation must be avoided at all costs; once students have fallen seriously behind, they are unlikely to ever catch up to their agemates, as the experience of failure introduces problems of poor motivation, self-esteem, and behavior that undermine the effectiveness of even the best remedial or special education approaches (see Bloom, 1981). Disadvantaged third graders who have failed a grade or who are reading significantly below grade level are very unlikely to graduate from high school (Lloyd, 1978) and will experience difficulties throughout their school careers (Shepard and Smith, 1989). In contrast, there is evidence that at-risk students given intensive additional instruction in the early grades can come to perform within the normal range in their later schooling (see Pinnell, 1989; Silver and Hagin, 1990).

Success for All was first implemented in the 1987-88 school year in one inner-city Baltimore elementary school, Abbottston Elementary. The first year assessment revealed substantially higher student performance on measures of language in preschool and kindergarten and on measures of reading in grades 1-3, compared to students in a matched school. Reading gains were especially large for students who had been in the lowest 25% of their grade on pretests; for these students, effect sizes averaged +.80 on individually administered measures. Further, there were substantial reductions in the numbers of students retained or assigned to special education (see Slavin et al., 1990).

As impressive as the results were, the Slavin et al. (1990) study has many limitations. First, the program was implemented in only one school. It is unclear to what degree unique characteristics of this school may have influenced the results. Also, the theory underlying the Success for All program depends on a cumulative effect of pre-

vention and early intervention. The first year data indicated a positive direction, but the cumulative impact could not yet be determined.

Additional Success for All Sites

During the 1988-89 and 1989-90 school years, several additional schools began to implement Success for All under a variety of circumstances (see Madden, Slavin, Karweit, Dolan, & Wasik, 1990). These schools varied in the resources added to their regular Chapter 1 allotments. In the original Success for All, Abbottston Elementary, and in one additional school, approximately $400,000 was added to hire additional staff to try to ensure that every child would succeed. These are referred to as "high-resource" schools. Three additional Baltimore schools implemented a much less expensive form of the program which reconfigured existing Chapter 1 resources and added approximately $40,000 for materials, training, and a half-time project facilitator. These are referred to as "low-resource" schools. All of these Baltimore sites serve student bodies that are almost entirely African American.

In 1988-89, one school in Philadelphia began to implement Success for All. In this school, a majority of students are Cambodian, and arrive in kindergarten with little or no English. As a result, the program incorporates elements directed at the needs of limited English proficient students. Finally, in 1989-90, an integrated school in rural Berlin, Maryland began to implement Success for All with a particular focus on reducing special education placements. The costs of the Philadelphia and Berlin implementations fall between those of the high-resource and low-resource schools, and are referred to as "moderate-resource."

The Success for All schools are among the most disadvantaged schools in their districts. All except the rural Maryland school are Chapter 1 schoolwide projects, which means that at least 75% of students qualify for free lunch and that schools can use their Chapter 1 resources to serve all children, rather than only test-eligible children.

The curricula being implemented in all Success for All schools are essentially the same, with each school receiving the same materials, supplies, and training. However, the schools vary considerably in numbers of personnel, in particular the numbers of tutors and family support staff. Table 1 summarizes the major characteristics and staffing of the seven Success for All schools.

Table 1 Here

The purpose of the present paper is to report the evaluation findings relating to Success for All as of its third year of implementation. In addition to summarizing the outcomes in each school, the paper examines the findings across sites and over time to explore such issues as the cumulative effect of the program, the degree to which funding levels are associated with outcomes, and applications of the model to the education of limited English proficient students and to the reduction of special education placements.

Program Elements

The main elements of Success for All are described below (adapted from Slavin et al., 1990).

Reading Tutors

One of the most important elements of the Success for All model is the use of tutors to promote students' success in reading. One-to-one tutoring is the most effective form of instruction known (see Slavin, Karweit, & Madden, 1989; Wasik & Slavin, 1990). The tutors are certified teachers with experience teaching Chapter 1, special education, and/or primary reading. Tutors work one-on-one with students who are having difficulties keeping up with their reading groups. The tutoring occurs in 20-minute sessions usually taken from an hour-l long social studies period. In general, tutors support students' success in the regular reading curriculum, rather than teaching different objectives. For example, if the regular reading teacher is working on long vowels, so does the tutor. However, tutors seek to identify learning problems and use different strategies to teach the same skills and teach metacognitive skills beyond those taught in the classroom program (Wasik & Madden, 1989).

During daily 90-minute reading periods, tutors serve as additional reading teachers to reduce class size for reading to about 15 in high-resource schools and about 20 in moderate and low-resource schools. Reading teachers and tutors use brief forms to communicate about students' spe-

cific problems and needs and meet at regular times to coordinate their approaches with individual children.

Initial decisions about reading group placement and the need for tutoring are based on informal reading inventories that the tutors give to each child. Subsequent reading group placements and tutoring assignments are made based on curriculum-based assessments given every eight weeks, which include teacher judgments as well as more formal assessments. First graders receive priority for tutoring, on the assumption that the primary function of the tutors is to help all students be successful in reading the first time, before they experience failure and become remedial readers.

The tutoring aspect of Success for All is similar to the approach taken in another highly successful program, Reading Recovery (Pinnell, 1989). The major difference between the two models of tutoring is that Success for All is closely linked to regular classroom reading instruction while Reading Recovery uses a stand-alone tutorial model.

Reading Programs

Students in grades 1-3 are regrouped for reading. The students are assigned to heterogeneous, age-grouped classes with class sizes of about 25 most of the day, but during a regular 90-minute reading period they are regrouped according to reading performance levels into reading classes of 15-20 students all at the same level. For example, a 2-1 reading class might contain first, second, and third grade students all reading at the same level, which eliminates the need for reading groups within the class.

Reading teachers at every grade level begin reading time by reading children's literature to students and engaging them in a discussion of the story to enhance their understanding of the story, listening and speaking vocabulary, and knowledge of story structure. In kindergarten and first grade, the program emphasizes development of basic language skills with the use of Story Telling and Retelling (STaR), which involves the students in listening to, retelling, and dramatizing children's literature (Karweit, 1988). The use of Big Books as well as oral and written composing activities allow students to develop concepts of print as they also develop knowledge of story structure. Peabody Language Development Kits are used to further develop receptive and expressive language.

Beginning reading is introduced in the second semester of kindergarten. In this program, letters and sounds are introduced in an active, engaging series of activities that begins with oral language and moves into written symbols. Once letter sounds are taught, they are reinforced by the reading of stories which use the sounds. The K-1 reading program uses a series of phonetically regular but interesting minibooks and emphasizes repeated oral reading to partners as well as to the teacher, instruction in story structure and specific comprehension skills, and integration of reading and writing (Madden & Livermon, 1989).

When students reach the primer reading level, they use a form of Cooperative Integrated Reading and Composition (CIRC) (Stevens, Madden, Slavin, & Farnish, 1987) with the district's basal series (see Madden, Slavin, Stevens, & Farnish, 1989). CIRC uses cooperative learning activities built around story-related writing. Students engage in partner reading and structured discussion of the basal stories, and work toward mastery of the vocabulary and content of the story in teams. Story-related writing is also shared within teams.

In addition to these basal story-related activities, teachers provide direct instruction in reading comprehension skills, and students practice these skills in their teams. Classroom libraries of trade books at students' reading levels are provided for each teacher, and students read books of their choice for homework for 20 minutes each night. Home readings are shared via presentations, summaries, puppet shows, and other formats twice a week during " book club" session.

Eight-Week Reading Assessments

At eight week intervals, reading teachers assess student progress through the reading program. The results of the assessments are used to determine who is to receive tutoring, to change students' reading groups, to suggest other adaptations in students' programs, and to identify students who need other types of assistance, such as family interventions or screening for vision and hearing problems.

Preschool and Kindergarten

Most of the Success for All schools provide a half-day preschool and/or a full-day kindergarten for eligible students. The preschool and kindergarten programs focus on providing a balanced and developmentally appropriate learning

experience for young children. The curriculum emphasizes the development and use of language. Thematic units integrate language, math, social studies, music, and art activities. Children are encouraged to select activities and to work cooperatively and independently at a variety of centers. Peabody Language Development Kits and the Story Telling and Retelling (STaR) program described earlier help foster language and literacy development. Explicit instruction in the beginning reading program begins in the second semester of kindergarten.

Family Support Team

A family support team works in each school. In the high-resource schools, social workers, attendance monitors, and other staff are added to the school's usual staff. In moderate and low-resource schools, the family support team consists of staff already present in the school. The family support team provides parenting education and works to involve parents in support of their children's success in school. Also, family support staff are called upon to provide assistance when students seem to be working at less than full potential because of problems at home. Students who are not getting adequate sleep or nutrition, need glasses, are not attending school regularly, or are exhibiting serious behavior problems receive family support assistance. The family support team is strongly integrated into the academic program of the school. The team receives referrals from teachers and tutors regarding children who are not making adequate academic progress and thereby constitutes an additional stage of intervention for students in need above and beyond that provided by the classroom teacher or tutor.

The family support program in Success for All resembles approaches emphasized in James Comer's (1988) schoolwide restructuring model, which has been effective in increasing student achievement over time.

Program Facilitator

A program facilitator works at the school to oversee (with the principal) the operation of the Success for All model. The facilitator helps plan the Success for All program, helps the principal with scheduling, and visits classes and tutoring sessions frequently to help teachers and tutors with individual problems. He or she works directly with the teachers on implementation of the curriculum, classroom management, and other issues, helps teachers and tutors deal with any behavior problems or other special problems, and coordinates the activities of the family support team with those of the instructional staff.

Teachers and Teacher Training

The teachers and tutors are regular certified teachers. They received detailed teacher's manuals supplemented by two days in-service at the beginning of the school year. For teachers of grades 1-3 and for reading tutors, these training sessions focused on implementation of the reading program, and their detailed teachers' manuals covered general teaching strategies as well as specific lessons. Preschool and kindergarten teachers and aides were trained in use of the STaR and Peabody programs, thematic units, and other aspects of the preschool and kindergarten models. Tutors later received an additional day of training on tutoring strategies and reading assessment.

Throughout the year, additional in-service presentations made by the facilitators and other project staff covered such topics as classroom management, instructional pace, and cooperative learning. Facilitators also organized many informal sessions to allow teachers to share problems and problem solutions, suggest changes, and discuss individual children. The staff development model used in Success for All emphasizes relatively brief initial training with extensive classroom followup, coaching, and group discussion.

Special Education

Every effort is made to deal with students' learning problems within the context of the regular classroom, as supplemented by tutors. Tutors evaluate students' strengths and weaknesses and develop strategies to teach in the most effective way. Tutors also communicate many effective methods of teaching students to their reading teachers. In some schools, special education teachers work as tutors and reading teachers with students identified as learning disabled.

Advisory Committee

An advisory committee composed of the building principal, program facilitator, teacher representatives, family support staff, and Johns Hopkins staff meets regularly to review the progress of the program and to identify and solve any problems that arise.

Evaluation Design

Matching

Each of the seven Success for All schools was matched with a comparison school that was similar in the percent of the students receiving free lunch, historical achievement level, and other factors. Within each matched school, students were individually matched on standardized achievement test scores from the spring before implementation began (except preschoolers, who were matched based on fall entry test scores).

Measures

All measures were the same as those used by Slavin et al. (1990). The tests were individually administered to students by specially trained students from local colleges. The specific measures used were as follows.

Language. Two tests of receptive and expressive language were individually administered to preschool and kindergarten students.

1. Test of Language Development (TOLD; Newcomer & Hammill, 1988). Individually administered Picture Vocabulary and Sentence Imitation Scales from the TOLD were used to assess receptive and expressive language concepts, respectively, of preschool and kindergarten students.

2. Merrill Language Screening Test (Mumm, Secord, & Dykstra, 1980). The individually administered comprehension scale from the Merrill was used to assess the ability of preschool and kindergarten students to understand complex story structure.

Reading. Four individually administered reading scales were selected from two widely used, nationally standardized reading batteries to assess a full range of reading skills: word attack (Woodcock Word Attack), recognition of letters and key sight words (Woodcock Letter-Word), oral reading fluency (Durrell Oral Reading), and comprehension (Durrell Oral and Silent Reading). These scales are described below.

1. Woodcock Language Proficiency Battery (Woodcock, 1984). Two Woodcock scales, Letter-Word Identification and Word Attack, were individually administered to students in grades K-2.

The Letter-Word scale was used to assess recognition of letters and common sight words, while the Word Attack scale assessed phonetic synthesis skills.

2. Durrell Analysis of Reading Difficulty (Durrell and Catterson, 1980). Two Durrell scales, Oral and Silent Reading, were administered to students in grades 1-3. Oral Reading presents a series of graded reading passages which students read aloud, followed by comprehension questions. The Silent Reading scale also uses graded reading passages which students read silently. Students are then asked to recall the main elements of the story. Both Oral and Silent Reading contain assessments of reading comprehension, but the Oral Reading focuses more on decoding and sight vocabulary while Silent Reading has more of a comprehension focus.

Analyses

Data were analyzed using analyses of covariance, with pretests as covariates. Outcomes are characterized in terms of effect sizes, which are the differences between experimental and control means divided by the control group's standard deviations. All analyses used raw or standard scores; grade equivalents are reported to facilitate understanding, but were not used in the analyses. For each of the analyses of reading achievement in grades 1-3, comparisons were made between all students at each grade level, and then separate analyses compared students who scored in the lowest 25% of their grades on pretests.

Results in Seven Schools

Abbottston

Abbottston Elementary school was the first Success for All school. It was intended to test the long- and short-term effects of a program which concentrates significant additional resources at the early grade levels to ensure that all children reach the end of third grade with adequate skills.

Program implementation began at Abbottston in

September, 1987. The school was allocated $400,000 in addition to its ordinary Chapter 1 allocation. These funds are used to provide preschool, full-day kindergarten, reading tutors, a full-time facilitator, and a social worker. A second social worker is donated by the Baltimore Department of Social Services, and a part-time nurse practitioner is donated by the Maryland Department of Health.

Table 2 Here

The outcomes of the fully-funded Success for All program at Abbottston after three years of program implementation are summarized in Table 2.

Pre-K and kindergarten results for 1989-1990 are provided in Table 2 for the third year of implementation at Abbottston Elementary. In contrast to the initial two years (1987, 1988), although the teachers were the same as in the previous two years and the curriculum was essentially the same, the results in the third year are not statistically different on any of the subtests.

In contrast to previous years, the pre-kindergarten classes witnessed a great deal of student mobility. In the two previous years, the classes were filled at the beginning of the year and any new students were placed on waiting lists. In this year, there were no waiting lists and many of the students who were tested enrolled in the pre-kindergarten after December.

The kindergarten results were generally positive, but again are not statistically different. The kindergarten students were matched at the beginning of the pre-kindergarten year. Thus, the kindergarten comparison is only for students who had both pre-kindergarten and kindergarten in the same school.

Results for the students in grades 1-3 strongly support the Success for All program. For first graders, statistically significant and substantial effects were seen on all reading measures, with an average effect size of +0.88. Effects for students who were in the lowest 25% of their grades at pretests were similar in magnitude (mean ES = +0.84), and were statistically significant for Durrell Silent Reading and the two Woodcock Scales but not for Durrell Oral Reading.

Second grade effects were also statistically significant on all four reading measures (mean ES = +.70). For low achievers, effects were statistically significant only on Woodcock Word Attack, but the mean effect size across all four measures was somewhat higher than that for students in general (mean ES = +0.88). Third grade effects were statistically significant on Durrell Silent Reading and Woodcock Letter-Word scales, and averaged +0.46 across all four measures. For low achievers, significant effects were found on both Durrell scales and on Woodcock Word Attack, and effect sizes averaged +1.06.

As part of the model's philosophy and policy, every effort is made to reduce retentions and special education placements. At Abbottston, 11% of students were retained each year before the program began. This rate has been reduced to less than one percent. The number of students assigned to special education for learning disabilities has fallen from approximate five students per year to fewer than three. These cannot be considered program outcomes, as they are part of the Success for All plan, but they are important considerations in understanding the overall impact of the model.

A typical criterion for referral to special education is performance that is two years below grade level. Averaging across the four reading measures, none of Abbottston's third graders performed this poorly. In contrast, ten percent of students in Abbottston's control school scored more than two years below grade level (see Slavin et al., in press).

City Springs

City Springs Elementary is the school serving the second-largest proportion of children in poverty in Baltimore, and has historically been among the lowest-achieving schools in the city. All of the students come from housing projects.

The implementation of Success for All at City Springs began in September, 1988. It is supported by a grant of approximately $370,000 per year from a Baltimore foundation. These funds are used to provide a preschool program, reading tutors, a facilitator, a social worker, an attendance monitor, and half the salary of a full-time counselor.

Table 3 Here

The results at the end of two years of implementation are summarized in Table 3.

The pre-kindergarten and kindergarten results in City Springs are positive and parallel the results found in other years. The average effect size across the pre-kindergarten tests was +1.53 and for kindergarten was +0.71.

The outcomes for students in grades 1-3 are positive but less so than at Abbottston. For first graders, significant positive effects were found only on Woodcock Word Attack. The mean effect size across all four measures was +0.22. For the lowest achieving students, significant effects were found for both Woodcock scales and the mean effect size was +0.87.

Second grade effects were also significant on both Woodcock scales, and averaged +0.41 across all four measures. Effects for the lowest 25% were not statistically significant (with an N of only 10 per group), but averaged an effect size of +0.32. Third grade outcomes were essentially zero for students in general, but were significantly positive for low achievers on Durrell Oral and both Woodcock scales, with an average effect size of +0.84.

Retentions at City Springs were reduced from approximately 10% to zero. Special education placements for learning disabilities were already very low at City Springs before Success for all, but have been slightly reduced from their low level.

Chapter 1-Only Schools

Three Baltimore City elementary schools are implementing a form of Success for All which is designed to assess the effects of the model with a level of funding that school districts could provide under their current Chapter 1 allocations. These schools reconfigured their existing Chapter 1 funds to support the program, and received approximately $40,000 per year from a federal dropout prevention grant for materials, training, and a part-time facilitator. In these schools the facilitators are Johns Hopkins staff rather than school district staff. The schools began implementing Success for All in 1988.

As is apparent from Table 1, the three Chapter 1 - only schools, Dallas Nicholas, Dr. Bernard Harris, and Harriet Tubman, have significantly fewer tutors than Abbottston and City Springs, and no additional family support staff. If they have preschools or extended-day kindergartens, these existed before the program began. Dallas Nicholas has the highest free-lunch count in Baltimore, and the other two schools are also among the most disadvantaged in the city.

Table 4 Here

Because of financial constraints, only one-third of the students in each of the Chapter 1-only schools and their control schools were given individual assessments. For this reason, results for the three schools are presented together (as the N's for any individual school are insufficient, especially for the low-25% analyses). These results, representing two years of implementation, are summarized in Table 4.

Although no statistically significant differences were found in preschools, significant differences on the TOLD scales favored Success for All in kindergarten. First grade outcomes are positive for students in general. Statistically significant effects were found on the Durrell Silent Reading and Woodcock Word Attack scales, and the mean effect size is +0.40. However, scores for the lowest 25% of students were near zero, possibly because of a floor effect. In second grade, very positive effects were found. Significant effects were seen on all four reading measures (mean ES = +.53). For the lowest 25%, significant positive effects were found on both Woodcock scales and marginally significant effects ($p < .10$) were found for both Durrell scales. The mean effect size was +1.16. However, third grade effects were near zero.

Retentions in the Chapter 1-only schools were reduced but not (as at Abbottston and City Springs) eliminated. From an average of 9%, retention rates were reduced to 3% across the three Chapter 1-only sites.

Francis Scott Key

Philadelphia's Francis Scott Key Elementary School was the first school to implement Success for All outside of Baltimore. It is also the only Success for All school in which there are significant numbers of students with limited English proficiency.

Located in South Philadelphia, Key school serves one of the most disadvantaged student populations in the city, with 96% qualifying for free-lunch. In 1989-90, fifty-five percent of Key students were Asian, almost all of them Cambodian. The remainder of the students were divided evenly between African American and white. In 1990-91, the Cambodian population is

approaching 70%.

Several adaptations in Success for All were made to meet the needs of limited English proficient (LEP) students (see Slavin & Yampolsky, 1991). Because of the unavailability of Cambodian-speaking teachers at Key School, it is unable to provide bilingual education. Instead, students receive services from teachers of English as a second language (ESL), but otherwise participate in the same instructional program as English-speaking students.

The focus of the ESL program at Key was on helping students succeed in English reading as well as speaking. ESL teachers taught a reading class using the same materials and similar instructional methods as those used with English-speaking students. Later in the day, the ESL teachers met with LEP students. In addition to traditional ESL instruction, they provided additional instruction in reading, focusing on the same books and skills being used in the reading class. In this way, LEP students received significantly more reading instruction than did other students. In addition, LEP students who were having the greatest difficulties in reading received one-to-one tutoring.

Finally, all kindergarteners participated in a cross-age peer tutoring program. Initially this program used middle school students as tutors, but when the middle school was moved out of the school, fifth graders took this responsibility. During peer tutoring sessions, bilingual Cambodian tutors were matched with Cambodian kindergarteners. The tutors read with their tutees and, in the case of Cambodian pairs, translated the books and discussed them in Cambodian and English. As the reading program was introduced in mid-kindergarten, the tutors also helped their tutees with their reading assignments. Over the year, tutoring discussions gradually transitioned from Cambodian to English. These activities, plus the emphasis on oral language which applies to instruction of all students in Success for All, enabled Cambodian students to succeed in the regular program.

There was a major difference in the experimental design used at Key from that used elsewhere. Because LEP students in Philadelphia do not take standardized tests, matching of individual students was impossible. Instead, Key was compared to another Philadelphia school which was similar in socioeconomic status, ethnic distribution, historical achievement levels, and other factors (see Slavin & Yampolsky, 1991, for details).

Table 5 Here

The results at Key after two years of program implementation are summarized in Table 5. The table shows outcomes separately for Asian and Non-Asian students. In kindergarten, the results significantly favor Asian Success for All students on the Merrill, Peabody, and TOLD scales, and on the IDEA Language Proficiency scale, a test of English proficiency for LEP students.

Significantly positive effects for non-Asian Success for All students were found on the Peabody scales, and marginally significant effects ($p < .10$) were found on the Woodcock Letter-Word and Merrill scales.

Substantial positive effects of Success for All were found for Asian first graders on all four reading scales (mean ES = +1.65). Differences on the IDEA were positive (ES = +.35), but not statistically significant. Means were in the same direction for non-Asian students, but only Woodcock Word Attack was marginally significant. The mean effect size was +0.26. In second grade, substantial and statistically significant positive effects were found for Asian Success for All students on all reading measures (mean ES = +1.00), and significant effects were also found on the IDEA. Third grade differences were non-significant for Asian students and favored the control group on the Woodcock scales in the non-Asian group.

Buckingham

The first non-urban implementation of Success for All began in September, 1989 at Buckingham Elementary School in Berlin, Maryland, a small town on Maryland's Eastern Shore. The school is evenly divided between African American and white students, and 43% of students qualify for free lunch.

The implementation of Success for All at Buckingham is unusual in that it came about primarily as a means of preventing special education placements rather than (as in all other implementations) as a potential solution to the problems of inner-city education.

A 50% random sample of matched first and second graders at Buckingham and a similar control school were given the individual reading measures. The results at the end of the first year

of implementation are summarized in Table 6.

Table 6 Here

As is clear from Table 6, outcomes in Buckingham's first grades were positive. Statistically significant effects were found on both Woodcock scales, and the mean effect size was +0.50. For the lowest-achieving 25% of students, effects were also statistically significant on both Woodcock scales and marginally significant on Durrell Silent Reading. The mean effect size was very large (mean ES = +2.04).

Second grade effects were marginally significant only on the Woodcock Word Attack scale (mean ES = +0.08). For low achievers, the Woodcock effects were very large and statistically significant, but other outcomes were non-significant. The substantial mean effect size of +1.03 is mostly due to the Word Attack effect.

Special education placements were substantially changed as part of the Success for All program. The year before Success for All was introduced, 22 students in grades K-3 were referred for possible learning disabilities, and 12 were accepted into special education. In the first year of Success for All, only six were referred and three accepted. In addition, of eleven students in self-contained special education programs before Success for All, all have been mainstreamed to part-time resource programs.

Retentions in grade have always been low at Buckingham, but fell from three before the program to zero in its first year.

Discussion

Although not all comparisons on all measures show statistically significant differences, the overall effects of Success for All are clearly positive. Looking across the outcomes at different sites and at earlier years' results (Slavin et al., 1990; Madden et al., 1990), a few patterns emerge.

First, the program outcomes are particularly strong on the Woodcock scales, probably because of the phonetic emphasis of the beginning reading curriculum. Effects on the Durrell scales are positive in almost all comparisons, but are not always statistically significant. Second, effect sizes are usually higher for students who began the program in the lowest 25% of their grades. Because the N's for these low 25% analyses are small, effect sizes must be very large to reach statistical significance. The particularly high effect sizes for low achievers, seen in all implementation years, are probably due to the fact that low achievers are most likely to receive tutoring.

The finding of very positive effects of Success for All on limited English proficient children is an important addition to the research in this area. Although bilingual approaches would probably have been preferable to the immersion/ESL approach taken with the Cambodian students in Success for All (Wong-Fillmore & Valadez, 1986), the positive effects found at Francis Scott Key for these students show that LEP children also benefit from prevention and early intervention in reading, and that integration of ESL instruction with regular classroom instruction can help development of both English language skills and reading skills.

Effects Across Grades and Years of Implementation

One interesting pattern in the data on Success for All across the years is the clear tendency for reading effects to be particularly positive in first grade after one year of implementation, first and second grades after two years, and first, second, and third grades after three years. Buckingham (one year) had very positive effects for first but not second graders; all five of the schools in the program for two years had very positive effects on first and second graders but not third graders; and only Abbottston (three years) had large positive effects at all three grade levels.

This pattern of findings is consistent with the theory underlying Success for All, which emphasizes prevention and early intervention. Even though the program initially addresses students in grades Pre-K to 3, and then moves to fourth and fifth graders, the idea behind Success for All is to begin students with success the first time they are taught. In particular, making certain that students get off to a good start in reading in first grade is a key concern. The pattern of the results suggests that it is difficult to make a substantial difference with students who have already fallen behind and perhaps have already developed negative attitudes, anxiety, and other problems that interfere with success in school. However, if students begin to receive effective instruction, tutoring,

and other supports in first grade or earlier, they can develop the skills and confidence on which effective instruction in the later grades can build.

Does Money Matter?

The seven Success for All schools vary considerably in levels of resources and staff. From an achievement perspective, the most important difference is between the three low-resource Chapter 1-only schools and the high- and moderate-resource schools. The high- and moderate-resource schools have the numbers of tutors and facilitator support felt to be necessary to ensure student success in the primary grades; the differences between high- and moderate-resource schools mostly relate to the preschool and family support staff. On the other hand, the low-resource schools have many fewer tutors and only half-time facilitators.

In terms of reading outcomes for students in general, there is not a clear difference between the low-resource and high- and moderate-resource schools. Looking across all three years of data (including data reported by Slavin et al., 1990, and Madden et al., 1990), reading effects for students in general are somewhat better for high- and moderate-resource schools than for low-resource schools in first grades, but not in second or third grades. Where extra resources do make a difference is for low achievers. The lowest 25% of students achieved substantially better (compared to their matched controls) in high- and moderate-resource schools in first and third grades; in second grades, all Success for All low achievers performed far better than control low achievers.

The benefits of additional resources are also seen in measures other than achievement. High-and moderate-resource schools, with the exception of Key, have all reduced their retention rates to near zero. Reductions in retentions have also been seen in low-resource schools, but they have not been able to essentially do away with retention as a school policy as have most of the high- and moderate-resource schools.

Changes in special education placements have been assessed only in the two high-resource Baltimore schools and at Buckingham, and they were substantially reduced in all three schools. However, reducing special education placements for learning disabilities is an explicit goal of the high- and moderate-resource schools, but not of the low-resource schools.

What the findings suggest is that existing Chapter 1 resources can be reconfigured to improve achievement of students in general. However, to make a more substantial difference with the lowest-achieving students who are most at risk for retention and special education, additional resources are needed.

The importance of additional resources used in a coordinated fashion to provide whatever is necessary for each child is illustrated by the case of Tavon (not his real name). Tavon, a student at City Springs, lives in a Baltimore housing project. He had completed kindergarten the year before Success for All began at City Springs. According to his teachers' reports, Tavon was already headed toward serious trouble. He was angry and aggressive, dealing with both teachers and other students as if they were out to get him. Tavon had to be removed from class frequently because of his disruptive behavior. He had little energy to put into his learning when he was in school, and he was not in school very consistently. When he did come to school, he usually arrived late, closer to 10:30 than 8:30.

Tavon was born when his mother was a young teenager. His mother felt helpless. She wanted her son to be successful but had few resources to help him, being hardly more than a child herself. Her son's response to the school was just like his mother's. The only way she knew how to react to her son's problems was to become angry and aggressive. In the first weeks of first grade, when the school contacted her about problems that Tavon was having, her response was to stomp into school cursing, threatening to take him out of this school since it couldn't deal with him.

Coordinated efforts by teachers, the facilitator, family support team members, and the family have worked to turn things around for Tavon. After the social worker made the mother feel welcome, she was able to encourage her to participate in parenting classes held at City Springs. She became more confident in her ability to handle her son. With concrete assistance from the attendance monitor, attendance started to improve. At first the school called her early every morning to get her started early enough to get her son to school. For a while, the attendance monitor met the mother halfway to school to provide support. Everyone made a concerted effort to make Tavon's mother feel welcome at school, helping her to feel better about herself.

Even as his behavior improved, Tavon still had very serious academic problems; on all tests given at the beginning of the first grade, he showed no evidence of having learned anything in kindergarten. Tavon was given an instructional program in which he could be successful and was given one-to-one tutoring which not only provided the academic support that he needed but also gave him emotional support. His tutor was a special person with whom he could share his struggles and successes.

The story is a successful one. As Tavon's mother began to work cooperatively with the school, Tavon's attitude toward school improved. He still has a strong temper, but he is learning how to deal with angry feelings in a constructive way. Tavon is in school on time every day. Learning still does not come easily for him, but he knows that if he works hard, he can learn, and he is making steady progress of which he's very proud.

Tavon's experience, which is like that of many students in Success for All, shows the importance of resources applied to students' individual needs. The number of person-hours invested in this one child is staggering, and he is still reading below grade level. Tavon's successes and those of similar multi-problem children do not make a large difference in the overall mean achievement level of the school, but they do make a large difference in the achievement of the lowest 25% of students and on retention rates and special education placements as well as on many outcomes that are more difficult to measure.

There is still much to learn about Success for All. The true effects of an early intervention program cannot be determined until students have been in the program for many years. Questions about the relative impact of different resource levels, different configurations of staff, and different community and school contexts require more schools than the seven studied so far. Yet the findings from research evaluating Success for All provide cause for optimism about the effectiveness of prevention and early intervention for disadvantaged students.

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Table 1

Characteristics of Success For All Schools

School	Location	Enrollment	Ethnicity	Percent Free Lunch	Years In Program	Resource Level	Number of Tutors	Preschool?	Full-Day Kindergarten?	Add'l Family Support Staff	Full/Half-Time Facilitator
Abbottston Elementary	Baltimore	550	97% Black	83%	3	High	6	Yes	Yes	2	Full
City Springs Elementary	Baltimore	500	99% Black	97%	2	High	9	Yes	No	2 1/2	Full
Dallas Nicholas Elementary	Baltimore	439	99% Black	98%	2	Low	2	Yes	No	0	Half
Dr. Bernard Harris Elementary	Baltimore	634	100% Black	94%	2	Low	3	Yes	No	0	Half
Harriet Tubman Elementary	Baltimore	475	100% Black	94%	2	Low	3	Yes	Yes	0	Half
Francis Scott Key Elementary	Philadelphia	622	55% Asian 21% White 21% Black	96%	2	Moderate	4	No	Some	0	Full
Buckingham Elementary	Berlin, Maryland	530	50% Black 50% White	40%	1	Moderate	3	Yes	No	0	Half

Table 2
Reading Outcomes, Abbottston Elementary School

	ALL STUDENTS				
	SFA		CONTROL		ES
	Raw	GE	Raw	GE	
Pre-Kindergarten		n=36			
Pretest	26.40		26.80		
	(8.67)		(8.53)		
Merrill	3.13		3.69		-0.36
	(1.67)		(1.55)		
TOLD Picture Vocabulary	7.06		8.00		-0.17
	(3.25)		(5.55)		
TOLD Sentence Imitation	6.69		5.63		+0.18
	(4.53)		(5.98)		
Mean ES					-0.12
Kindergarten		n=40			
Pretest	29.20		32.60		
	(8.36)		(8.69)		
Merrill	4.65		4.00		+0.54[a]
	(0.93)		(1.21)		
TOLD Picture Vocabulary	12.60		11.30		+0.27
	(5.20)		(4.90)		
TOLD Sentence Imitation	11.40		10.30		+0.15
	(7.20)		(7.20)		
Woodcock Letter-Word	7.15		6.60		+0.15
	(3.40)		(3.60)		
Mean ES					+0.28

Key:

a	$p < .10$
*	$p < .05$
**	$p < .01$
***	$p < .001$

Table 2 (Continued)

	ALL STUDENTS					LOWEST 25%				
	SFA		CONTROL		ES	SFA		CONTROL		ES
	Raw	GE	Raw	GE		Raw	GE	Raw	GE	
Grade 1		n=58					n=15			
Pretest	336.48 (73.32)		339.53 (68.21)			239.86 (41.22)		249.91 (26.67)		
Durrell Oral	7.72 (7.77)	2.2	4.76 (4.49)	1.7	+0.66***	2.29 (3.58)	1.3	1.71 (2.70)	1.2	+0.21
Durrell Silent	6.66 (7.26)	2.0	2.59 (3.80)	1.4	+1.07***	2.29 (3.22)	1.3	0.71 (1.49)	1.1	+1.06*
Woodcock Letter-Word	19.71 (6.21)	1.8	16.59 (5.17)	1.5	+0.60***	15.71 (4.03)	1.5	12.07 (3.34)	1.2	+1.09**
Woodcock Word Attack	7.14 (5.88)	2.5	2.78 (3.62)	1.7	+1.20***	3.79 (3.29)	2.0	1.36 (2.44)	1.5	+1.00*
Mean ES					+0.88					+0.84
Grade 2		n=44					n=10			
Pretest	318.39 (80.78)		319.27 (77.78)			202.90 (30.73)		209.20 (27.54)		
Durrell Oral	14.23 (9.51)	3.3	9.73 (6.87)	2.5	+0.66***	5.00 (4.83)	1.8	3.20 (2.52)	1.5	+0.71
Durrell Silent	10.00 (7.87)	2.6	6.64 (6.19)	2.0	+0.54**	4.00 (3.27)	1.6	1.80 (3.46)	1.2	+0.64
Woodcock Letter-Word	25.43 (7.74)	2.9	21.57 (6.71)	2.2	+0.58***	17.10 (5.83)	1.5	15.20 (5.07)	1.4	+0.37
Woodcock Word Attack	10.14 (6.47)	3.5	5.14 (4.93)	2.4	+1.01***	4.50 (3.03)	2.0	0.90 (2.02)	1.3	+1.78**
Mean ES					+0.70					+0.88
Grade 3		n=43					n=10			
Pretest	365.49 (57.52)		366.26 (56.26)			293.00 (25.90)		295.00 (23.41)		
Durrell Oral	19.72 (7.23)	4.2	18.28 (8.27)	4.0	+0.17	17.60 (6.79)	3.9	12.80 (4.34)	3.1	+1.11*
Durrell Silent	16.14 (7.15)	3.6	10.28 (7.98)	2.6	+0.73***	15.20 (8.44)	3.5	6.60 (6.60)	2.0	+1.36**
Woodcock Letter-Word	30.56 (5.41)	3.6	26.28 (6.63)	2.5	+0.65***	28.30 (4.90)	3.0	23.80 (7.91)	2.1	+0.57
Woodcock Word Attack	11.35 (6.40)	3.7	9.58 (5.95)	3.1	+0.30	10.00 (5.64)	3.2	5.50 (3.69)	2.1	+1.22*
Mean ES					+0.46					+1.06

Table 3
Reading Outcomes, City Springs Elementary School

	ALL STUDENTS				
	SFA		CONTROL		ES
	Raw	GE	Raw	GE	
Pre-Kindergarten		n=28			
Pretest	27.30		27.30		
	(7.94)		(7.59)		
Merrill	2.58		1.50		+0.87*
	(1.24)		(1.24)		
TOLD Picture Vocabulary	7.08		6.16		+0.20
	(4.72)		(4.55)		
TOLD Sentence Imitation	9.91		2.50		+3.51***
	(5.25)		(2.11)		
Mean ES					+1.53
Kindergarten		n=28			
Pretest	25.30		27.60		
	(7.83)		(7.68)		
Merrill	4.07		4.07		0.00
	(1.20)		(1.07)		
TOLD Picture Vocabulary	12.43		8.14		+1.09*
	(4.72)		(3.92)		
TOLD Sentence Imitation	11.43		7.07		+0.89a
	(7.40)		(4.90)		
Woodcock Letter-Word	8.14		8.43		-0.07
	(3.61)		(4.31)		
Woodcock Word Attack	1.77		.27		+1.65*
	(2.44)		(.91)		
Mean ES					+0.71

Key:

a	$p < .10$
*	$p < .05$
**	$p < .01$
***	$p < .001$

Table 3 (Continued)

	ALL STUDENTS					LOWEST 25%				
	SFA		CONTROL		ES	SFA		CONTROL		ES
	Raw	GE	Raw	GE		Raw	GE	Raw	GE	
Grade 1		n=38					n=10			
Pretest	357.74 (64.18)		358.45 (66.90)			278.09 (32.57)		278.09 (32.57)		
Durrell Oral	3.84 (4.42)	1.6	4.53 (5.59)	1.7	-0.12	1.45 (2.70)	1.2	0.91 (2.43)	1.1	+0.22
Durrell Silent	3.21 (4.47)	1.5	2.58 (4.98)	1.4	+0.13	0.91 (1.87)	1.1	0.36 (1.21)	1.0	+0.45
Woodcock Letter-Word	17.29 (4.16)	1.6	16.45 (5.75)	1.5	+0.15	15.73 (2.49)	1.4	12.55 (3.08)	1.2	+1.03*
Woodcock Word Attack	5.13 (3.35)	2.1	2.32 (3.88)	1.7	+0.73***	4.36 (2.87)	2.0	0.64 (2.11)	1.3	+1.76**
Mean ES					+0.22					+0.87
Grade 2		n=42					n=10			
Pretest	325.24 (64.26)		326.12 (65.09)			263.70 (25.43)		264.50 (25.17)		
Durrell Oral	7.43 (5.21)	2.2	5.81 (5.05)	1.9	+0.32^a	5.20 (4.83)	1.8	4.20 (3.58)	1.6	+0.28
Durrell Silent	5.19 (4.70)	1.8	3.81 (4.04)	1.6	+0.34	3.80 (3.33)	1.6	3.20 (3.68)	1.5	+0.16
Woodcock Letter-Word	20.43 (5.31)	1.8	18.29 (5.31)	1.6	+0.40*	17.60 (3.44)	1.6	17.20 (4.37)	1.5	+0.09
Woodcock Word Attack	5.14 (3.72)	2.1	2.83 (4.04)	1.7	+0.57**	3.30 (3.16)	1.8	1.60 (2.27)	1.5	+0.75
Mean ES					+0.41					+0.32
Grade 3		n=43					n=11			
Pretest	480.05 (125.47)		481.71 (124.34)			328.09 (58.93)		332.00 (57.25)		
Durrell Oral	13.78 (7.22)	3.2	14.54 (10.16)	3.4	-0.07	8.36 (3.20)	2.3	5.09 (4.56)	1.8	+0.72*
Durrell Silent	9.51 (6.85)	2.5	10.05 (8.37)	2.6	-0.06	5.82 (3.16)	1.9	4.00 (4.38)	1.6	+0.42
Woodcock Letter-Word	25.27 (5.66)	2.3	24.05 (7.93)	2.2	+0.15	21.18 (3.92)	1.9	17.09 (4.70)	1.5	+0.87*
Woodcock Word Attack	7.62 (4.95)	2.6	7.24 (6.03)	2.6	+0.06	4.27 (3.04)	2.0	1.55 (2.02)	1.5	+1.35*
Mean ES					+0.02					+0.84

Table 4
Reading Outcomes, Chapter One Only Schools

	ALL STUDENTS		
	SFA Raw	CONTROL Raw	ES
Pre-Kindergarten	n=56		
Pretest	31.50	31.50	
	(8.15)	(8.73)	
Merrill	2.86	3.78	-0.14
	(1.53)	(6.49)	
TOLD Picture Vocabulary	8.00	7.43	+0.14
	(4.59)	(4.22)	
TOLD Sentence Imitation	7.21	6.03	+0.25
	(4.75)	(4.80)	
Mean ES			+0.08
Kindergarten	n=48		
Pretest	29.30	31.80	
	(8.41)	(8.72)	
Merrill	4.21	4.29	-0.09
	(1.02)	(0.91)	
TOLD Picture Vocabulary	13.45	8.71	+1.18**
	(4.28)	(4.02)	
TOLD Sentence Imitation	12.71	8.13	+0.96*
	(8.21)	(4.75)	
Woodcock Letter-Word	9.54	8.75	+0.17
	(4.41)	(4.53)	
Woodcock Word Attack	1.76	0.67	+0.89
	(2.90)	(1.23)	
Mean ES			+0.62

Key:

a	$p < .10$
*	$p < .05$
**	$p < .01$
***	$p < .001$

Table 4 (Continued)

	ALL STUDENTS					LOWEST 25%				
	SFA		CONTROL		ES	SFA		CONTROL		FS
	Raw	GE	Raw	GE		Raw	GE	Raw	GE	
Grade 1		n=73					n=18			
Pretest	345.11 (63.99)		345.52 (62.77)			246.27 (20.58)		240.81 (19.76)		
Durrell Oral	5.78 (6.20)	1.9	5.07 (4.81)	1.8	+0.15	0.67 (2.09)	1.0	1.60 (2.64)	1.2	-0.35
Durrell Silent	4.38 (4.86)	1.7	2.77 (3.71)	1.4	+0.43***	1.33 (2.58)	1.2	0.67 (1.45)	1.0	+0.46
Woodcock Letter-Word	17.55 (6.08)	1.6	16.48 (5.23)	1.5	+0.20	11.47 (5.04)	1.2	12.07 (3.21)	1.2	-0.19
Woodcock Word Attack	5.89 (4.91)	2.2	2.66 (3.92)	1.7	+0.82***	1.73 (2.69)	1.5	1.27 (2.37)	1.4	+0.19
Mean ES					+0.40					+0.03
Grade 2		n=74					n=19			
Pretest	369.34 (63.08)		368.93 (63.78)			283.89 (41.10)		282.74 (42.91)		
Durrell Oral	12.95 (7.95)	3.1	9.51 (6.56)	2.5	+0.52***	8.63 (4.90)	2.4	5.79 (4.10)	1.9	+0.69[a]
Durrell Silent	8.76 (6.28)	2.4	6.62 (5.21)	2.0	+0.41*	6.32 (6.68)	2.0	3.89 (3.02)	1.6	+0.80[a]
Woodcock Letter-Word	25.34 (7.04)	2.3	22.26 (6.40)	2.0	+0.48**	22.47 (5.98)	2.0	17.89 (4.86)	1.6	+0.94*
Woodcock Word Attack	8.59 (5.80)	2.8	5.04 (5.11)	2.1	+0.69***	6.16 (3.53)	2.2	1.63 (2.06)	1.5	+2.20***
Mean ES					+0.53					+1.16
Grade 3		n=71					n=18			
Pretest	491.41 (95.30)		490.92 (94.34)			376.06 (49.26)		376.50 (48.60)		
Durrell Oral	17.13 (9.19)	3.8	16.03 (8.05)	3.6	+0.14	9.56 (4.26)	2.5	10.67 (7.36)	2.7	-0.15
Durrell Silent	13.21 (8.54)	3.1	11.46 (7.77)	2.8	+0.23[a]	7.67 (6.30)	2.2	7.33 (6.14)	2.2	+0.06
Woodcock Letter-Word	27.44 (7.05)	2.8	25.94 (7.61)	2.5	+0.20	23.39 (4.91)	2.0	22.28 (7.26)	2.0	+0.15
Woodcock Word Attack	9.50 (6.43)	3.0	8.78 (6.46)	2.9	+0.11	5.33 (2.43)	2.1	4.78 (5.30)	2.0	+0.10
Mean ES					+0.17					+0.04

Table 5
Reading Outcomes, Francis Scott Key Elementary School

	ASIAN STUDENTS					NON-ASIAN STUDENTS				
	SFA		CONTROL		ES	SFA		CONTROL		ES
	Raw	GE	Raw	GE		Raw	GE	Raw	GE	
Kindergarten		n=79					n=76			
Merrill	1.96 (1.55)		0.91 (1.16)		+0.91**	3.81 (1.42)		3.26 (1.44)		+0.38[a]
Peabody Picture Vocabulary	7.27 (4.60)		4.87 (3.99)		+0.60*	12.42 (4.81)		9.37 (4.85)		+0.63**
TOLD Sentence Imitation	3.82 (2.78)		2.35 (2.04)		+0.72**	10.83 (7.11)		9.20 (5.78)		+0.28
Woodcock Letter-Word	6.29 (3.20)		5.83 (2.82)		+0.16	7.15 (4.01)		5.89 (2.36)		+0.53[a]
Mean ES (Language)					+0.60					+0.46
Language Proficiency (IDEA)	2.32 (0.74)		1.90 (0.54)		+0.77**					
Grade 1		n=93					n=100			
Durrell Oral	5.44 (4.76)	1.8	1.27 (2.44)	1.1	+1.71***	5.08 (3.79)	1.8	4.68 (4.21)	1.7	+0.10
Durrell Silent	3.45 (3.51)	1.5	0.84 (1.92)	1.0	+1.36***	4.77 (3.48)	1.7	3.56 (3.76)	1.5	+0.32
Woodcock Letter-Word	17.87 (7.26)	1.6	11.37 (4.92)	1.1	+1.32***	19.56 (4.47)	1.6	17.88 (6.32)	1.5	+0.27
Woodcock Word Attack	5.51 (4.64)	2.1	0.98 (2.05)	1.3	+2.21***	6.13 (2.94)	2.2	4.55 (4.37)	2.0	+0.36[a]
Mean ES (Reading)					+1.65					+0.26
Language Proficiency (IDEA)	3.27 (1.52)		2.84 (1.23)		+0.35					

Key:

a	$p < .10$
*	$p < .05$
**	$p < .01$
***	$p < .001$

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Table 5 (Continued)

	ASIAN STUDENTS					NON-ASIAN STUDENTS				
	SFA		CONTROL		ES	SFA		CONTROL		ES
	Raw	GE	Raw	GE		Raw	GE	Raw	GE	
Grade 2		n=116					n=127			
Durrell Oral	11.00 (5.10)	2.8	7.05 (3.94)	2.1	+1.00***	10.52 (5.42)	2.7	10.48 (5.94)	2.7	+0.01
Durrell Silent	7.79 (4.49)	2.2	4.87 (4.11)	1.7	+0.71***	7.58 (4.89)	2.2	8.71 (5.71)	2.4	-0.20
Woodcock Letter-Word	25.63 (5.56)	2.3	19.82 (5.38)	1.6	+1.08***	25.14 (5.16)	2.2	23.86 (6.31)	2.1	+0.20
Woodcock Word Attack	8.14 (5.94)	2.4	3.35 (3.94)	1.8	+1.22***	8.95 (5.61)	2.4	7.95 (5.20)	2.3	+0.19
Mean ES (Reading)					+1.00					+0.05
Language Proficiency (IDEA)	4.21 (1.47)		3.26 (1.14)		+0.83***					
Grade 3		n=105					n=111			
Durrell Oral	13.92 (7.36)	3.3	11.95 (4.73)	2.9	+0.42a	14.69 (7.58)	3.4	15.52 (6.19)	3.5	-0.13
Durrell Silent	10.55 (6.23)	2.7	9.44 (5.11)	2.5	+0.22	10.76 (6.56)	2.7	12.95 (10.76)	3.1	-0.20
Woodcock Letter-Word	24.94 (7.10)	2.2	27.12 (6.19)	2.5	-0.35a	26.56 (7.36)	2.7	29.98 (5.73)	3.1	-0.60*
Woodcock Word Attack	8.39 (7.03)	2.4	8.42 (5.63)	2.4	-0.01	9.24 (5.77)	2.9	12.28 (6.14)	3.4	-0.50*
Mean ES (Reading)					+0.07					-0.36
Language Proficiency (IDEA)	4.66 (1.63)		4.76 (1.56)		-0.06					

Key:

a	$p < .10$
*	$p < .05$
**	$p < .01$
***	$p < .001$

Table 6
Reading Outcomes, Buckingham Elementary School

	ALL STUDENTS					LOWEST 25%				
	SFA		CONTROL		ES	SFA		CONTROL		ES
	Raw	GE	Raw	GE		Raw	GE	Raw	GE	
Grade 1		n=50					n=14			
Pretest	220.58		223.08			188.00		169.00		
	(31.47)		(30.61)			(23.16)		(24.21)		
Durrel Oral	5.16	1.8	4.63	1.7	+0.15	4.48	1.6	1.43	1.2	+1.60
	(3.24)		(3.49)			(4.65)		(1.90)		
Durrell Silent	4.21	1.6	2.99	1.4	+0.35	3.71	1.6	0.86	1.0	+1.82[a]
	(3.58)		(3.53)			(3.73)		(1.57)		
Woodcock Letter-Word	19.20	1.7	17.00	1.4	+0.42[*]	19.14	1.6	12.57	1.2	+1.07[*]
	(2.97)		(5.19)			(4.81)		(6.13)		
Woodcock Word Attack	7.40	2.3	3.72	1.9	+1.06[**]	8.00	2.4	1.00	1.3	+3.66[*]
	(5.27)		(3.47)			(7.66)		(1.91)		
Mean ES					+0.50					+2.04
Grade 2		n=58					n=18			
Pretest						306.22		303.33		
						(19.02)		(20.99)		
Durrell Oral	15.29	3.5	16.70	3.7	-0.23	11.41	2.8	10.96	2.7	+0.09
	(4.92)		(6.20)			(3.84)		(4.79)		
Durrell Silent	9.86	2.5	9.72	2.5	+0.02	7.56	2.2	6.48	2.0	+0.17
	(5.65)		(6.42)			(2.00)		(6.38)		
Woodcock Letter-Word	29.90	3.1	29.55	3.1	+0.08	26.89	2.4	25.56	2.2	+0.34
	(3.61)		(4.44)			(2.37)		(3.88)		
Woodcock Word Attack	14.48	4.7	12.00	3.5	+0.41[a]	13.44	4.6	5.89	2.3	+3.51[**]
	(5.10)		(6.07)			(5.57)		(2.15)		
Mean ES					+0.05					+1.03

Key:

a	$p < .10$
*	$p < .05$
**	$p < .01$
***	$p < .001$